

REMARKS

By this amendment claims 2, 3, 6-26 are canceled. Therefore, on entering this amendment, claims 1, 4 and 5 are all the claims pending in the application.

Claims 1, 2, 4-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Che et al. (U.S. Patent No. 5,604,587).

Claim 3 is rejected under 35 U.S.C. 103(a) as being anticipated over Che et al (U.S. Patent No. 5,604,587 in view of Matsuura et al. (U.S. Patent No. 5,108,201).

The Applicants traverse the rejections and request reconsideration.

Rejections based on prior art

By this amendment, the Applicants cancel claims 2 and 3 and incorporate their features into claim 1.

Present invention, as recited in the amended claim 1, requires a reflection layer that is formed of air. For example, according to the first embodiment of the invention, shown in Figs. 1-2, the reflection layer is formed of an air layer 11 which is surrounded by the protection tube 10 which prevents a light incident from outside from transmitting on the inner tube 9.

Referring to Fig. 2 of the cited reference Che, the liquid sample and the capillary (12) act as a core. Che discloses that the core is covered by the polymer material (38). The refractive index of the polymeric material is lower than the capillary (12), so that a clad is formed. Thus, an optical waveguide (cell) is constituted. In this configuration, **no air layer is formed outside of the inner tube as a clad.**

According to the present invention, as recited in amended claim 1, an air layer is formed outside the inner tube. The protection tube is provided outside of the inner tube to prevent light from outside from being transmitted into the inner tube. As is known, this light from outside causes noise if it is passed into the inner tube. Specifically, using the structure of this invention, no outer coating is required to prevent the light from outside being transmitted onto the inside of the tube.

Additionally, because air has a very low refractive index, the optical waveguide cell can be formed in a simple manner.

Regarding claim 3 (which has now been canceled), the Examiner appears to be mischaracterizing the teaching of Matsuura. As an initial matter, Matsuura suggests ridge type optical waveguides. There is no mention of an inner tube, a reflective layer and an outer tube. Even if the structures shown in Figs. 2-4 are construed to have this structure, the air layer is suggested to be an outer clad layer. Mutsuura suggests an inner substrate 1 made of silicon, a core layer 2 and an outer clad layer of air. (see 9:42-49 and 9:63-10:2 of Mutsuura). In such a case, because of the presence of the core layer, light will never reach the air layer. In other words, there is no suggestion that light passes through the silicon layer 1, the core layer 2 and then gets reflected by the upper clad layer formed of air. Therefore, the air layer does not appear to be in a position to act as a reflective layer. There is no explicit suggestion for a reflective layer made of air in Mutsuura.

Further, Mutsuura does not overcome the deficiency noted in the teachings of Che. Moreover, the teachings of Mutsuura and Che cannot be combined without considerable

modifications that would render the respective devices inoperable for their respective designed uses.

Claims 4 and 5 are dependant on claim 1, and are allowable for the same reasons.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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